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Volume 2 Issue 6

OUR MISSION

Accelerate the awareness, understanding, and adoption of wildland fire science information by federal, tribal, state, local, and private stakeholders in Michigan, Minnesota, and Wisconsin

CONTACT US

- *Charles Goebel, Principal Investigator, goebel.11@osu.edu*
- *Robert Ziel, Program Coordinator, ziel.4@osu.edu*

IN THIS ISSUE

ASSESSING RISK FOR WILDLAND FIRE DECISIONS

Interagency "Relative Risk Assessment" Process Suggests Relevant Issues

US Federal Fire Policy calls for risk management to be a key factor in all fire management decisions. Every significant decision in the wildland fire environment carries risk related to uncertainty about the outcome.

Wildfire threats vary in time and space. They can be mitigated, depending on the capabilities of resources that may be employed. But there is ample evidence that thoughtful evaluation of risk factors, identification of mitigation measures, and decisive action in response to questions that arise is important to management outcomes and community protection.

Consider the factors identified by the Wildland Fire Decision Support System (WFDSS) as part of their Relative Risk Assessment. The graphs found in the link to the right help the user integrate three important factors: values, hazard, and probability.

Values that affect overall risk include ecological, social, and economic resources that can be lost or damaged. Smoke issues, loss of critical habitat, cultural and historic resources, timber values, and private property interests are but a few examples to be considered. The WFDSS assessment can help put their their value and importance in context.

Hazards include concerns about potential fire behavior, including how fast the fire may spread, the difficulty of work along the fireline, and the potential for the fuels of concern to produce unexpected or undesirable effects. This may also be where crew capabilities should be considered.

Probabilities often carry most of the uncertainty for any decision. Can the fire be contained to the defined area? Will the weather and fuel conditions change over time? Is it a spring or summer burn?

Though much of this is not new to any experienced manager, the way in which factors are organized, described, and integrated into an overall risk rating (low, mod, high) can inform which actions are worth the risk and what can be done to mitigate, or reduce, those risks.

Find details in doc found here:

http://www.nwcg.gov/general/memos/nwcg-042a-2010.pdf

Growing Season Burns: Replies Highlight Questions & Answers

The article last month on "Fire Seasonality" brought a number of responses from the consortium community. The variety of sources and responses themselves were positive in several ways.

First of all, without any formal way to gauge interest in these monthly newsletters, the responses to that article showed that folks are reading. Thanks for that. But the substance of the feedback shows that the community is engaged and ready to share their expertise and learn from others. The challenge will be to provide an effective vehicle for the conversation over time.

The web search conducted by Jessica Miesel pointed out that fire managers will need to do more than just "google" for answers. Greg Peterson and Greg Corace both pointed out research publications that the search missed, either because of age or keywords used by the author.

Others reported their concerns for threatened populations and their reproductive success as important considerations when expanding prescription windows to new seasons.

Scott Weyenberg, Fire Ecologist with the National Park Service, pointed out that internal studies and gray literature may not be widely available. He also suggested that summer burning in red pine of northern Minnesota may produce more diversity of surface vegetation than comparable spring burns.

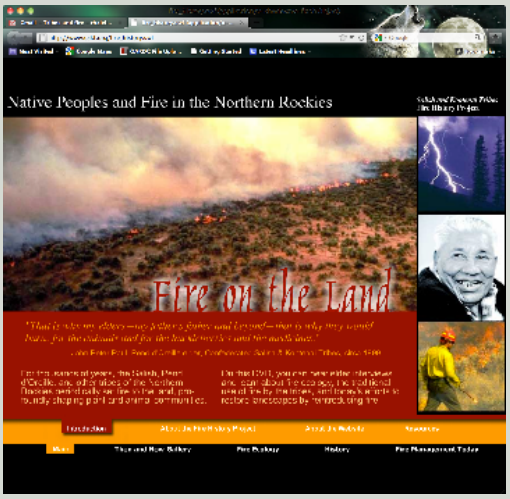
Finally, here in early June, a large wildfire in jack pine and prescribed fires under oak suggest that fires after greenup are a fact of life here.

Please continue to contact Robert Ziel at ziel.4@osu.edu if you would like to weigh in on when and how fire has a role as we share our understanding of fire seasonality in the Lake States. Thanks for the thoughts.

Fire on the Land

Native Peoples and Fire History in the Northern Rockies

Nicholas Reo, Research Fellow at the University of Michigan, pointed out this website pulled together by the Salish and Kootenai in Montana.



(http://www.cskt.org/fire_history.swf)

The site is provided as a resource for "anyone seeking information about the Indian use of fire and fire management on the Flathead Reservation." It includes a photo gallery, fire ecology information, training materials, and comparative looks at fire history and fire management today.

Lake States Spotlight

University of Toronto & Canadian Forest Service

With many lake states fire managers applying fire tools from both the US and Canada, this spotlight points to an important, new collaboration. University of Toronto and Canadian Forest Service are building a program in physical fire science based at the Faculty of Forestry at the University. The partnership's focus is on research in forest fire behavior and the development of enhancements to the Canadian Forest Fire Danger Rating System (CFFDRS). This will involve both field research & model development in areas such as fuel moisture, fire occurrence & fire behavior. Mike Wotton (CFS) leads the work. http://firelab.forestry.utoronto.ca/people/bmw.html

Joint Fire Science Program

http://www.firescience.gov

FLASH

SCIENCE YOU CAN USE

Kidnie, S.M., Wotton, B.M., and Droog, W.N.; Field Guide to Predicting Fire Behavior in Ontario's Tallgrass Prairie; 2010; University of Toronto; 65p.

This field guide was created to address the need for a more accurate estimate of fire behavior in the tallgrass prairie of southern Ontario. Actual fire behavior in tallgrass prairies consistently exceeded Canadian Forest Fire Behaviour Prediction (FBP) predictions in the matted and standing grass fuel types (O1-a and O-1b) leading prescribed burn practitioners to under-predict expected fire behavior as well as limiting the conditions under which tall grass species can be expected to burn. The models used in this guide can be used for all grass types in Ontario, however this assumption has not been tested.

This grass field guide and several supporting resources (including how-to references, worksheets, and other tools) can be found at the University of Toronto's Fire Management Systems Laboratory Page

http://firelab.forestry.utoronto.ca/

2 Underburning Publications:

Alban, David; 1977; Influence on Soil Properties of Prescribed Burning Under Mature Red Pine; USFS Research Paper NC-139 8p.

Prescribed fires in mature red pine stands reduced shrub competition and the organic layer thickness. the fires reduced nutrients in the forest floor, increased them in the mineral soil, but had no effect on overstory growth.

McRae, Douglas J., Lynham, Timothy L. and Frech, Robert J.; 1994; Understory Prescribed Burning in Red Pine and White Pine; The Forestry Chronicle; 70:395-401

Research in Canada, principally using the Canadian Forest Fire Behavior Prediction (FBP) System coupled with the Canadian Forest Fire Weather Index (FWI) System, allows forest managers to develop burning prescriptions that are safe and economical while meeting objectives for seedbed preparation, natural seeding and control of competing vegetation.

CONSORTIA CORNER

LAKE STATES ANNOUNCEMENTS

- **35th Annual National Indian Timber Symposium, June 13-16 Carlton, Minnesota**
- **Northeast Forest Fire Supervisors Meeting, June 20-23, Traverse City, Michigan**
- **Barrens and Dry Northern Forest Field Trip, St. Ignace and Raco, Michigan, June 28-29. Contact ziel.4@osu.edu**
- **Michigan Prescribed Fire Annual Meeting, September 9-10, Hastings, Michigan**
- **Eastern Tallgrass Prairie & Oak Savanna (ETPOS) Fire Science Consortium**

Lake States Advisory Committee

Marty Cassellius,
Bureau of Indian Affairs,
marty.cassellius@bia.gov

Theresa Gallagher,
US Forest Service,
tgallagher@fs.fed.us

Kathie Hansen,
National Park Service,
kathie_hansen@nps.gov

Dave Heaman, Ontario Ministry of Natural Resources,
dave.heaman@ontario.ca

Andy Henriksen, USDA Natural Resource Conservation Service,
andy.henriksen@mi.usda.gov

Tim Hepola,
US Fish and Wildlife Service,
tim_hepola@fws.gov

Doug Miedtke, Minnesota Department of Natural Resources,
doug.miedtke@state.mn.us

Russ Reisz,
The Nature Conservancy,
rreisz@tnc.org

Michele Richards, Military Facilities Environmental Resources
michele.richards@us.army.mil

Mark Sargent, Wildlife Division
MI Dept of Natural Resources
msargent@michigan.gov

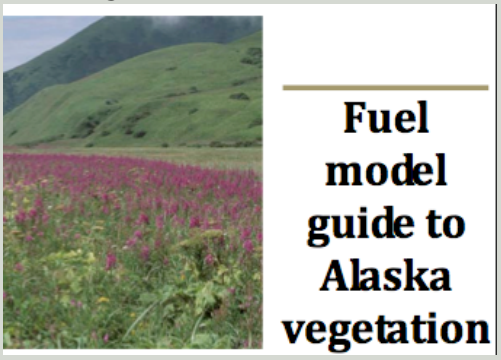
Wisconsin Department of Natural Resources

Can We Build a Lake States Fuels Guide?

Evaluating potential fire behavior is important to any risk assessment; for prescribed fire and wildfire. Many of the fire behavior modeling tools in common use today simplify description of the fuel characteristics that influence fire spread, intensity and severity.

There are 53 standard choices organized into 6 fuel groups designed to represent situations across the US system and 16 fuel types in 5 categories in the Canadian System. With both systems in use across the Lake States, there is a lot of knowledge and experience built into both prescribed burn and wildfire response plans.

While there is general consensus about how the most fire prone ecosystems are depicted, every region of the country faces the challenge of relating a variety of ecosystems across the landscape to fuel classifications that reflect the range of fire behavior. link



This Alaska guide is an example of what can be produced to support users in a particular region. If you want to know more, contact ziel.4@osu.edu

Lake States Administrative Team

The Ohio State University

Charles Goebel, Associate Professor, Forest Ecosystems
goebel.11@osu.edu
330-263-3789

David Hix, Associate Professor Silviculture
Hix.6@osu.edu

Eric Toman, Assistant Professor Outreach Strategies
toman.10@osu.edu

Robyn Wilson, Assistant Professor, Science & Risk Analysis
wilson.1376@osu.edu

US Fish & Wildlife Service

Greg Corace,Forester,
Seney National Wildlife Refuge
greg_corace@fws.gov

Tim Hepola, Fire Management
US FWS, Midwest Region
tim_hepola@fws.gov

USFS Northern Research

Brian Palik, Research Ecologist
Northern Research Station
bpalik@fs.fed.us

Randy Kolka, Soil Scientist,
Northern Research Station
rkolka@fs.fed.us

Matt Bumgardner, Research Forest Product Technologist,
Northern Research Station
mbumgardner@fs.fed.us

Consortium Staff

Robert Ziel, Program Coordinator, ziel.4@osu.edu
906-553-4249

Jessica Miesel, Post-Doctoral Researcher, miesel.1@osu.edu